**HUMPHREYS & PARTNERS** ARCHITECTS, L.P.

YEAR

WEBINAR

## OUR SPEAKERS



GREG FAULKNER
PRESIDENT

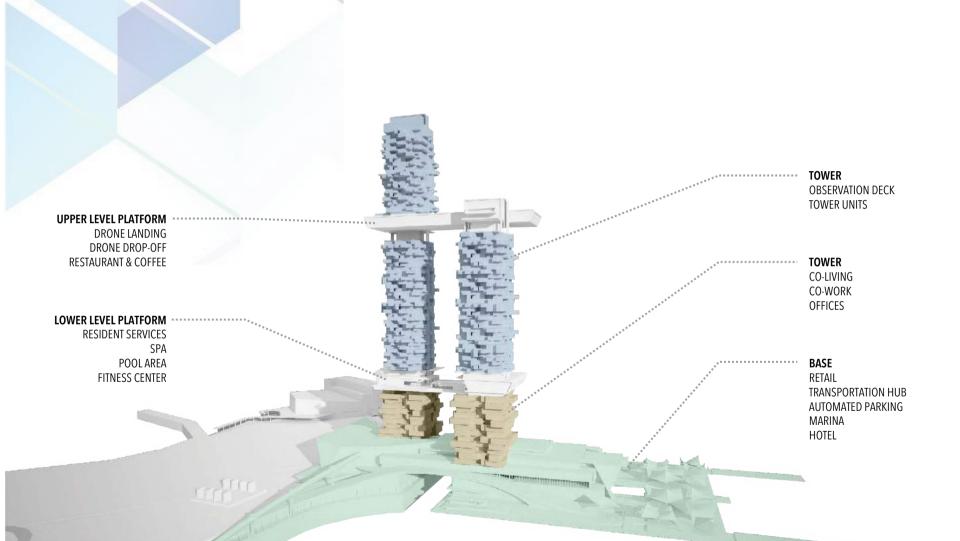


WALTER HUGHES
VICE PRESIDENT OF DESIGN



**DANIEL GEHMAN**STUDIO DIRECTOR, CALIFORNIA







## **CO-WORKING**

- . 84% of users are more motivated
- . 69% of users feel more successful
- . 82% have expanded their networks
- . 69% learned new skills

## **CO-LIVING**

- . Unique community feel
- . Rapidly growing segment
- . Small units, loaded with services
- . One bill

























#### LOWER LEVEL PLATFORM

## **AMENITIES**

- Cocktail bar
- Private dining room
- . Cigar lounge
- . Poker room
- Kids playroom
- . Fitness Center
  - . Rock climbing
  - . Electro-magnetic bikes
  - . Immersive fitness
  - . Hydro training
  - . Spa
  - . Cryotherapy
- . Hot & cold storage
- . Package mail box
- . Pet services

BASE / PROMENADE

## **ENTERTAINMENT**

5G network, real time connection, LED lightining, food, music and people watching.

## . OBSCURA

- . Immersive experience
- . Inspire audiences

## . ECHO

- . Huge virtual image from a small projector
- . Captivating and memorable
- . Image directly onton the viewer's eye













TOWER / OFFICE

# DIGITAL TECHNOLOGY INTERACTIVE GLASS

- . Smart surface technology
- . Transforms a variety of surfaces into functional touchscreens
- . Watch TV shows in the kitchen while you cook
- . Manage home appliances
- . Bluetooth audio and online video
- . Plan a bus trip on a interactive map























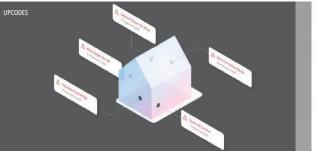


LOWER LEVEL PLATFORM

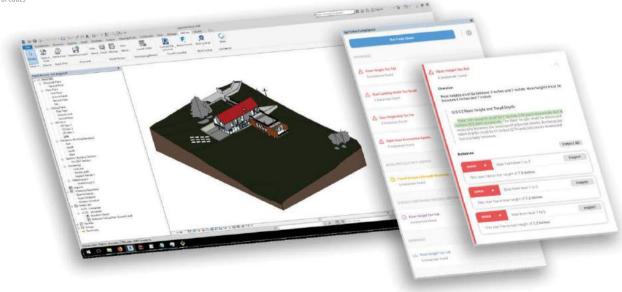
## **VIRTUAL REALITY**

- . Selling projects yet to be built
- . Eliminates need for model units
- . Easy finish out showcase
- . 24/7 robot assistance
- . Variety of finishes at the touch of a bottom





#### UPCODES



# BUILDING CODE AUTOMATION

- . For architects and engineers
- . View code errors in Revit
- Accelerate project timelines
- . Reduce errors













BASE / RETAIL

## **SMART SHOPPING**

- . Shoppers make 51% of their purchases online
- . 44% of orders placed on smartphones
- E-commerce is growing 23% year over year
- In 2022 e-commerce sales are going to be \$640.000 million US

## **AMAZON GO**

Amazon Go is a new kind of store featuring the world's most advanced shopping technology.

## **HOME ASSISTANTS**

## **Google Home**

- . Hands-free help
- . Control your smart home

## **Alexa**

- . Control your smart home
- . Ask any question

## **Apple Home Kit**

. Control your home kit





D-LINK







APPLE



## **TECHNOLOGY**

#### Nest

- . Thermostat
  - . Energy savings 10% to 15%
- . Protect
  - . Lets you know where smoke is coming from
- . Hello
  - . Lets you know who's there 24/7
  - . Go back 3 hour snapshot history
- . Cam
  - . See your home 24/7
  - . Alert when something happens
- . Doorbell camera
- . Multi-credential property acces control
- . A.I. vacuum
- . Glass cleaners



























## **SMART KITCHEN**

#### INTERACTIVE COOKTOP

- Embedded induction surface
- Multi-touch counter

#### **MOLEY CHEF ROBOT**

- . Reproduces the human hands
- . Operated from a touch screen or via smartphone

## **SMART REFRIGERATOR**

- . Create shopping list
- . Peek inside your refrigerator

## **FOOD RECYCLER**

. Zera converts 95% of waste into ready/to/use fertilizer

## **SOLAR TRASH COMPACTOR**

. Powered by solar energy













## **SMART BATHROOM**

## **U BY MOEN**

- . Digital Shower
- Control by voice, phone and controller
- . Avoid wasting water
- . Set temperature, length, notificactions

#### **SMART WATER**

- . Automatic bathtub filling
- Desire depth and temperature

## **NUMI HIGH TECH TOILET**

- . Motion-Activated cover and seat
- Deodrizer
- . Heated seat
- . Foot warmer
- . Music

**SUSTAINABILITY** 

## **DYNAMIC GLASS**

## COOLING

. Saves 34% in cooling loads

## **LIGHTING**

. Saves 29% in electrical use

## **VISIBLE LIGHT**

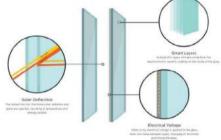
. Controls between 60%-1%

## **SOLAR HEAT**

. Controls between 0.40-0.05











TOWER / UNITS

# ALL IN ONE FURNITURE

- . Ori
  - At the touch of a button, the full sized configuration transforms to offer a full scale bedroom, office and living room
- . Versatility and mobility
- . Cost savings
- . Space savings

















TOWER / UNITS

## **MODULAR**

#### **EXCEPTIONAL QUALITY**

. Reach superior results than traditional techniques

#### **SPEED**

. Built in about 1/3 the time needed to construct a site-built building

## **COST SAVINGS**

. Modular construction can save the consumer 10-20%

# FLEXIBILITY OF DESIGN ENERGY EFFICENCY

. 50% more energy efficient

## **'KASITA' CONCEPT**

- . Small package
- . Delivered ready













TOWER / UNITS

## **PREFAB**

- Offsite construction
- Factory built
- Standard buildings chassis
- Mass production allows more time focused on delivering high quality and creative design solutions
- Fast construction
- Lower cost by buying in bulk
- Katerra







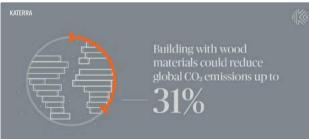


ICONTAINERS









**SUSTAINABILITY** 

## **WIND POWER**

#### COST

. Less than 1 cent per kWh

## **ENERGY PER YEAR**

. Small wind turbines could provide up to 1.5 TW.h

## **CARBON FOOTPRINT**

. Yearly emissions eliminated

## **SOLAR POWER**

- . Double digit growth year after year **COST** 
  - . 3.7 cents per kWh

## **ENERGY PER YEAR**

. 1 watt-peak of solar PV capacity generates 1 to 2 kWh





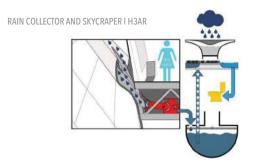




















#### SUSTAINABILTY

## **WATER**

- Less than 5% of water is used for drinking and cooking
- Greywater makes up 65% of wastewater
- Reduces water bills 30%

## **VERTICAL FARMS**

- 1 acre = 100 farmed acres
- . 90% less waste

## **GREEN WALLS**

- Reduces urban heat island effect
- Cleans air of pollutants



## **WALKWAY**

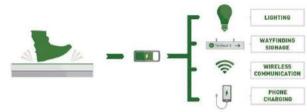
The promenade will include a Pavegen and EnGo energy generating walkway.

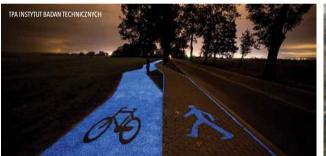
- . 5 Watts per footstep
- . 1 footstep = 30 sec LED street lamp

## **BIKE SERVICES**

- . AUTOMATED BIKE PARKING
  - . 24.9 bikes/m2
  - . 13 sec average retrieval time
- . SOLAR BIKE PATH
  - . Generates 10 hours of light
- BIKE PATH GENERATES ENERGY
- . 3.000 kw/h in 250 feet, enough to power a home for a year























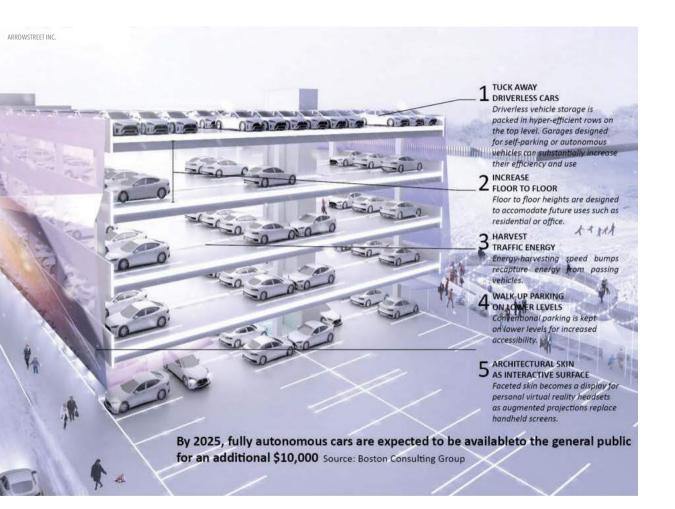
# AUTONOMOUS VEHICLES

#### CAR

- . Tesla charger: 30 min charging your vehicle
- . Prevents 90% of car accidents
- . Increases road capacity by 273%

## **BUS**

- . 100% autonomous
- . 15 passengers
- . 25 km/h operating speed
- . 9 hours autonomy



## **PARKING**

## CONVENTIONAL GARAGE DESIGNED TO ADAPT TO AUTONOMUS VEHICLES

- Today the typical car is used only 5% of the time
- . 95% of the time is parked, at a house or on the street
- . By the time today's garages are built, self parking cars and shared fleets will be a reality



## **PARKING**

# PARKING GARAGE EVOLUTION

- . Car ownership will evolve to a subscription service with intelligent fleets
- . Less need for parking
- . In 2035, the need for parking should decline by more than 5.7 billion square meters in the United States

# A.I.

## **PERSONAL ASSISTANT**

## **TEMI**

. Personal assistant

## **HONDA**

- . A18. Charming companion
- . B18. Chair-type mobility
- . C18. Multi-functional cargo
- . D18. Autonomous off-road vehicle

## **CUTTI**

. Elder autonomy help













PLATFORM'S CONNECTION

## HORIZONTAL ELEVATORS

## **DIRECTION**

. Vertical and horizontal

## **FOOT PRINT**

50% less

## **CAPACITY**

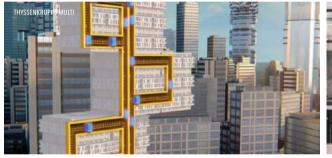
50% more

## **WEIGHT**

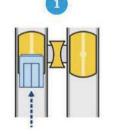
- . 50% less compared to standard technologies
- . Allows for new building configurations

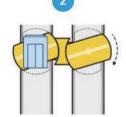


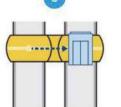


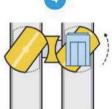


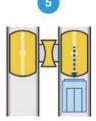












# ROBOTIC CONSTRUCTION

## **TIMBER CONSTRUCTION**

- . Modules prefabricated by robots
- . Robotic precision
- . Computer-aided

## **3D PRINTING**

- . Computer controlled
- . Enables almost any shape
- . Fast and accurate construction
- . Low labour costs
- . Less material waste

























## **UAV DELIVERY**

UNMANNED AERIAL VEHICLE

60% reduction in delivery costs

## **AMAZON PRIME AIR**

- . Improves road safety
- Reduces delivery time, less than 30 minutes
- Package delivery up to 5 pounds

## **CONNECT ROBOTICS**

- . Drone delivery service wherever it is needed
- Don't have to buy any equipment
- . Seller and customer connected
- . Drone takes off after the payment is done in the app
- . Fuly automated, end-to-end













## **AVs DELIVERY**

DRIVER LESS

## **KROGER GROCERY DELIVERY**

- . Vehicle for groceries
- . Take up very little space on the road

#### **ROBOMART**

- . Mobile grocery market
- . "Grab and Go" technology
- . Fresh fruit and vegetables stock

## **DOMINO'S PIZZA AV**

- . Ford and Domino's fusion
- . Built-in pizza oven
- Customer will have a PIN number



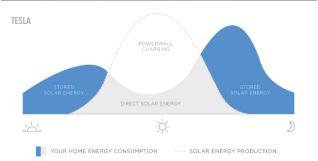












SUSTAINABILTY

## **TESLA ENERGY**

## **SOLAR ROOF**

- . \$21.85 per square feet
- . Invisible solar cells
- . Infinite tile warranty
- . \$5000 cost
- \$2000 installation

## **POWERWALL**

. Stores the excess solar energy

## **TESLA APP**

 Monitor and manage your storage energy.















## **SMART CITIES**

#### SIDEWALK LABS

- Transformation from an ownership model to a mixed model of fleet-owned vehicles
- . Opportunity to right-size the automobile itself
- . Driverless shuttle buses replace private cars
- Will have some kind of spatial differentiation or universal time-of-day pricing
- . Elimination of on-street parking and transforming that space into bike lanes, bus lanes, and loading/unloading spaces
- . Traffic lights track the flow of pedestrians











## **TRANSPORTATION**

#### **HYPERLOOP**

- . System of tubes through which a pod travels free of air resistance and friction
- Average speed of 600 mph
- . Goal of being in service by 2021

#### **SPACE X**

- . NYC to Shanghai in 39 minutes
- Elon Musk, imagines carrying people from any part of the world in less than 30 minutes

#### **UBER**

- . Drone flying car
- . Rideshare network
- . Operational by 2023







TOP PLATFORM

### **DRONES**

#### **FLIGHT SPEED**

. 100 km/h

#### **CRUISING DURATION**

. 25 min

#### **CRUISING ALTITUDE**

. 500 m

**TOWER** 

# PRIVATE DRONE PLATFORM

The private drone platforme can be used by penthouse owners.

. Called in via app







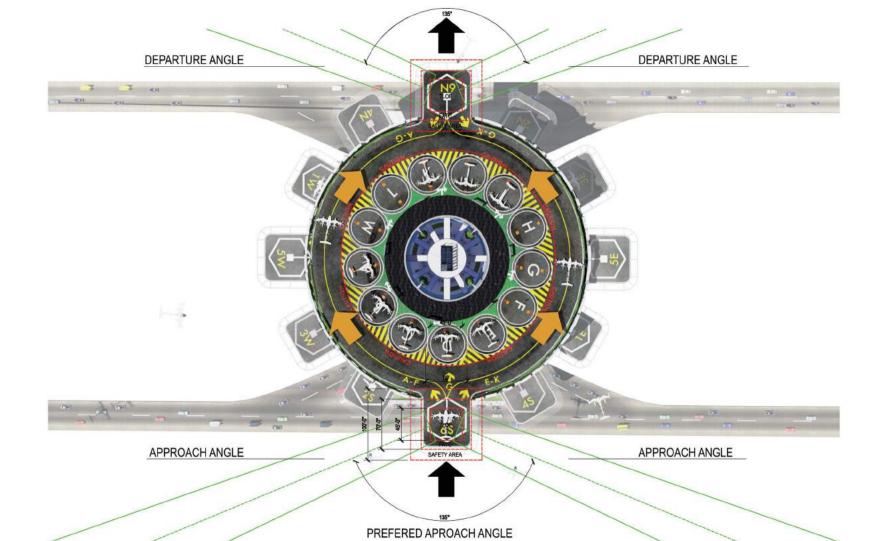


















MODULAR MULTIFAMILY THE NAKED TRUTH

### IS MODULAR THE **MULTI-FAMILY CONSTRUCTION?**



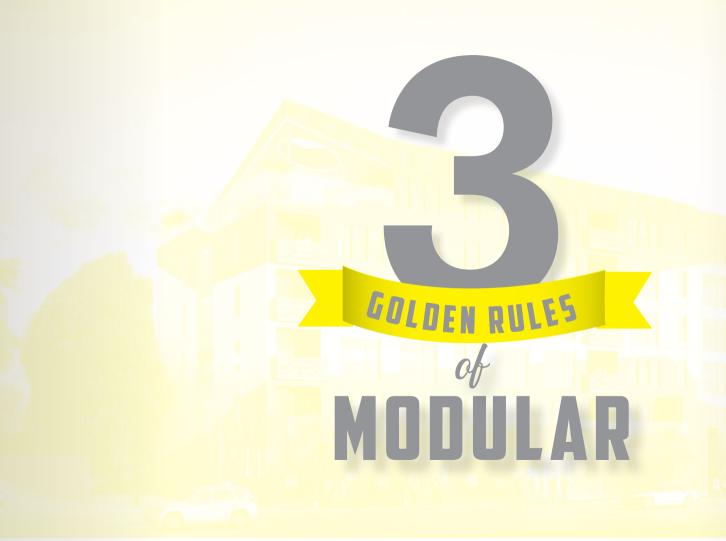


SHALL WE CLARIFY WHAT WE MEAN BY MODULAR?

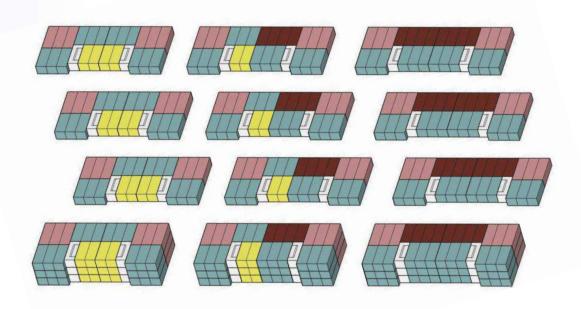


TODAY'S MODULAR CONSTRUCTION IS MUCH MORE THAN DOUBLEWIDES AND TRAILER PARKS.





### Minimum Number of Maximum-Sized Boxes



### STRAIGHT, IFILATIONAL





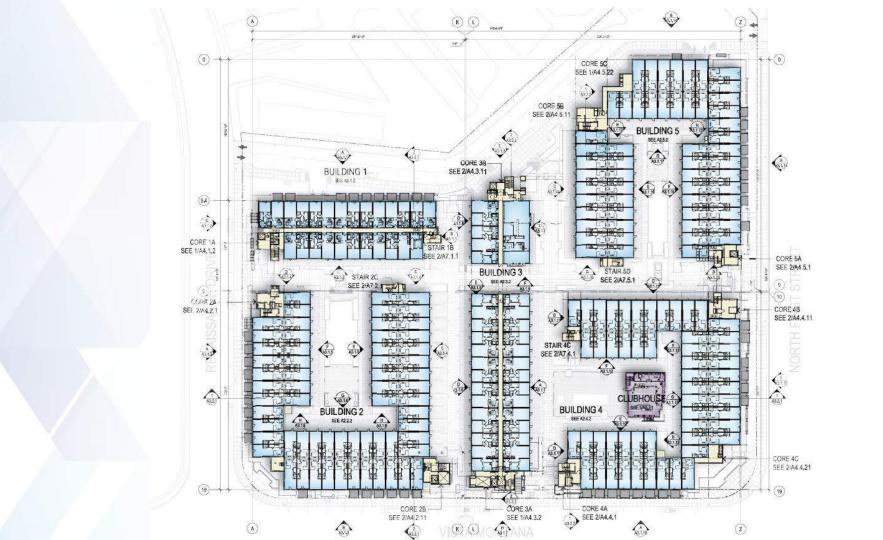
Highly Disciplined Design Team

Modular to Stick?

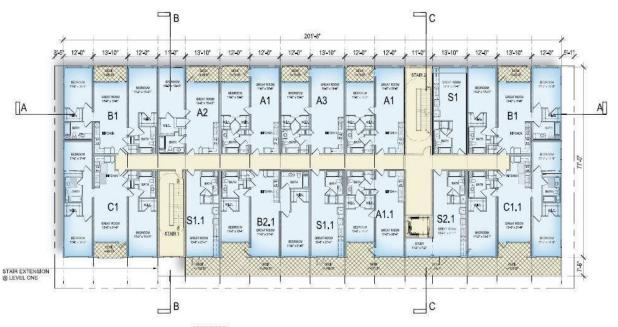
Ok, no problem.

Stick to Modular?

Fuhgeddaboutit!



## WHAT MODULAR WANTS TO DO



PRIVATE USABLE OPEN SPACE

GROUP USABLE OPEN SPACE

## WHAT MODULAR WANTS TO DO



PRIVATE USABLE OPEN SPACE

GROUP USABLE OPEN SPACE



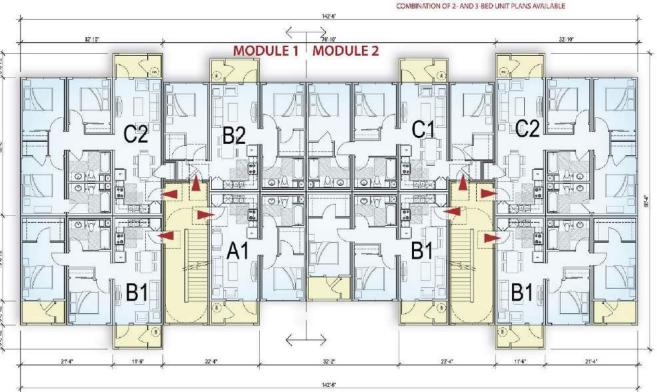






#### BUILDING COMPOSED OF MODULES FOR REPETITION

# WHAT MODULAR CAN DO









**Faster** 

**Price Certainty** 

**Better Quality** 

Safer, Security, Noise....



Transportation & Installation Costs

Early Decision Making

\$\$\$ Front End Loaded

Uses 20% More Material



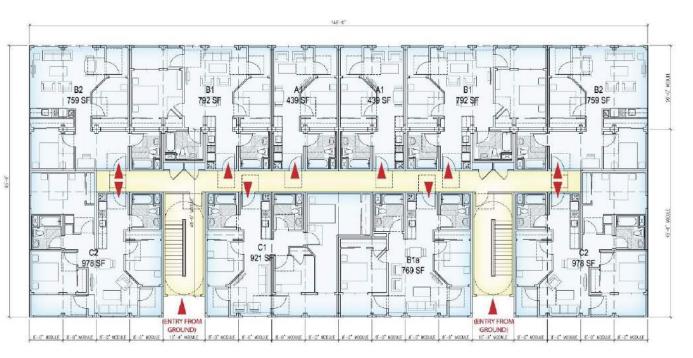
BUILDING COMPOSED OF MODULES FOR REPETITION COMBINATION OF 1- AND 2-BED UNIT PLANS SHOWN; 3- BEDROOMS PLANS AVAILABLE

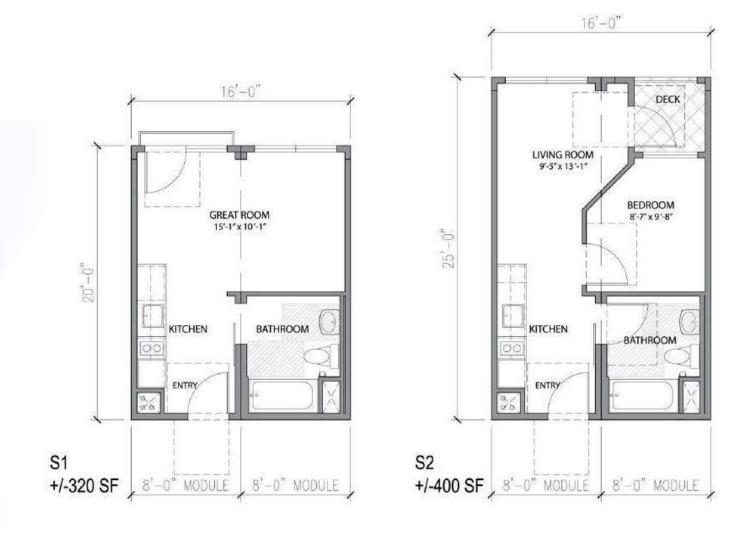
1227"

GREAT ROOM GREAT ROOM 11"0"X254" BLOBOOM, A1 BEQ 1BA 1BED/ LBA 1/ 755 NRSF +/- 961 NRSF WICHEN 1 : 1 1 18 8 BEDROOM PARTH TOTAL MODULE 0 MODULE 0 0 0 4 UBED/ 28A 28ED/28A 18ED/ 18A 77 755 NRSF DISTINCT LANAI ELEMENT TO STAIR STICK BUILT ON SITE **ENVOKE TRADITIONAL VERNACULAR** POTENTIAL TO ADD ON MODULE AND SUN SHADING TO INTRODUCE 3-BED UNITS

# WHAT MODULAR \*\* WILL DO

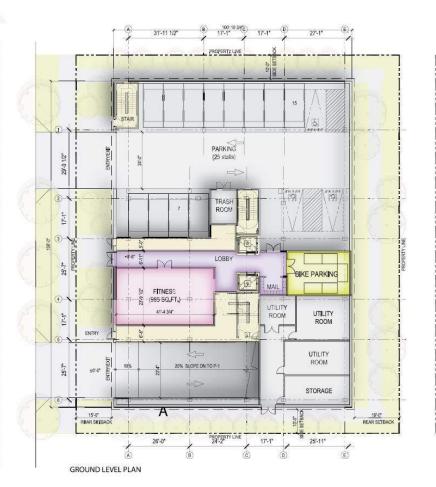
# WHAT MODULAR B WILL DO





WHAT MODULAR WILL DO



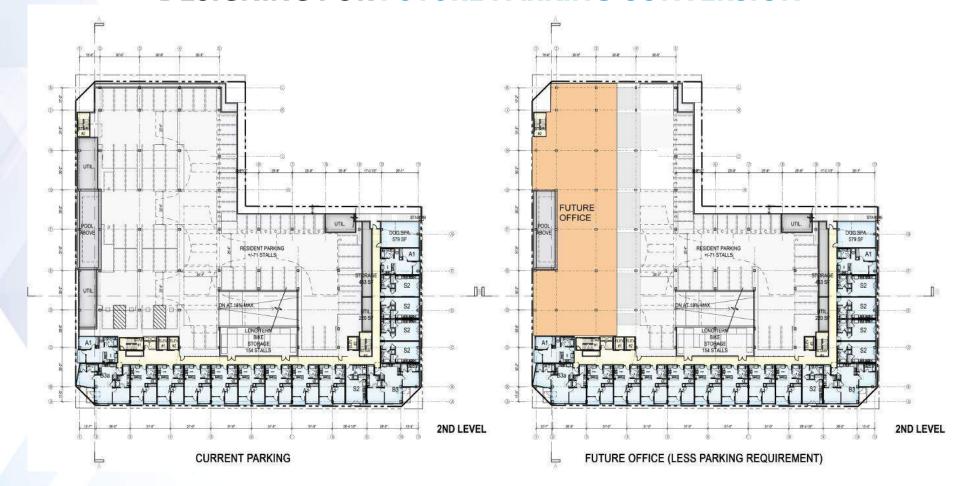




TYPICAL UPPER LEVEL PLAN



### **DESIGNING FOR FUTURE PARKING CONVERSION**



**HUMPHREYS & PARTNERS** ARCHITECTS, L.P.

# CONSTRUCTION COSTS 2018



CONVENTIONAL MULTIFAMILY

Because of the unstable market right now, due to tariffs on steel and other imported materials, lumber cost, and labor issues, it is very difficult to provide numbers today that will hold up 6 months or more from now. Also, our spreads are a little bit wider due to timing, location, site conditions, and materials specified for each individual project.

**GINY KNUDSEN** 

gknudsen@ceitn.net



CONVENTIONAL MULTIFAMILY

All price increases we have seen are commodity driven. There was a recent drop in lumber but its still high versus last quarter. A lot of the uncertainty from the tariffs has led to increases and we are actually seeing rebar increases now due to the tariffs. Most recent increases have been on quartz... all our concrete guys are pushing the rebar increases.

Labor is still a concern but it hasn't necessarily driven up pricing as its been factored in and projected for a couple years now.

**BRAD DINERSTEIN** 

Brad.Dinerstein@tdc-properties.com

CONVENTIONAL MULTIFAMILY



### MARC PADGETT mpadgett@summitcontractors.com

#### Surface / Garden Style Product:

#### \$93-\$98/NSF - 1,000 SF Average - Without Sitework

HUD 221 D4 Note - Residential Davis Bacon Wage Rates Apply - We are seeing an increase of around 3-5% from conventional deals

#### E-Urban / Surface Parked Product:

#### \$110 - \$115 w/ minimal sitework

HUD 221 D4 Note - Residential Davis Bacon Wage Rates Apply - We are seeing an increase of around 3-5% from conventional deals

#### Wrap Garage Product (4-Story):

#### \$145-\$150 depending on location

HUD 221 D4 Note - Residential Davis Bacon Wage Rates Apply - We are seeing an increase of around 3-5% from conventional deals

#### Wrap Garage Product (5-Story):

#### \$175-\$180/ sq ft = 900 sq ft avg depending on location

HUD 221 D4 Note - Commercial Davis Bacon Wage Rates Apply - We are seeing an increase of around 8-10% from conventional deals

#### 4-story Podium Parked Product:

### \$185-\$190/NSF - NFPA 13R Type V construction - Depending on location & if any parking is buried below grade HUD 221 D4 Note - Residential Davis Bacon Wage Rates Apply - We are seeing an increase of around 3-5% from conventional deals

#### 5-story Podium Parked Product:

### \$200-\$225 /NSF - NFPA 13 Type III Construction - Depending on location & if any parking is buried below grade HUD 221 D4 Note - Commercial Davis Bacon Wage Rates Apply - We are seeing an increase of around 8-10% from conventional deals

HUD General Note - We also suggest owners carry additional contingency of at least 5% on top of what the HUD requires from conceptual estimate until 100% CDs are developed as some times the HUD approval process can be very time consuming.

Prices depend on square foot average, site conditions and other factors. \*15% higher out West (not California, Midwest or Northeast) 15% to 30% higher in California, Midwest, Northeast and Pacific Northwest. 10% higher on 5-story product.



MARK LEAR mlear@bblbuildingco.com

> Surface / Garden Style Product:

\$112 - \$125 NRSF

E-Urban / Surface Parked Product:

\$120 - \$132 NRSF

Wrap Garage Product (4-Story): \$145 - \$160 NRSF

Wrap Garage Product (5-Story): \$150 - \$165 NRSF

5 Stories Over 1 Level Podium (6 total) \$160 - \$175 NRSF

JUSTIN MORRIS jmorris@jordanfosterconstruction.com

Surface / Garden Style Product: \$110 - \$120 NRSF

E-Urban / Surface Parked Product: \$118 - \$130 NRSF

Wrap Garage Product (4-Story): \$140 - \$155 NRSF

Wrap Garage Product (5-Story): \$150 - \$165 NRSF

4 Stories Over 1 Level Podium (5 total) \$155 - \$165 NRSF

5 Stories Over 1 Level Podium (6 total) \$160 - \$175 NRSF



LEIA SIDWA LeiaS@ProvidentGC.com

Surface / Garden Style Products: \$115/\$125 NRSF

E-Urban / Surface Parked Product: \$122/\$130 NRSF

Wrap Garage Product (4-Story): \$145/\$155 NRSF

Wrap Garage Product (5-Story): \$155/\$165 NRSF

4 Stories Over 1 Level Podium (5 total): \$165-\$175 NRSF

5 Stories Over 1 Level Podium (6 total): \$170-\$185 NRSF



GINY KNUDSEN gknudsen@ceitn.net

Surface / Garden Style Products: \$120/\$140 NRSF

E-Urban (3 story): \$125/\$140 NRSF

E-Urban (4 story): \$130/\$145 NRSF

Wrap Garage Product (4-Story): \$145/\$155 NRSF

Wrap Garage Product (5-Story): \$160/\$180 NRSF

4 Stories Over 1 Level Podium (5 total): \$155-\$175 NRSF

5 Stories Over 1 Level Podium (6 total): \$185-\$240 NRSF

> Light Steel over Concrete Podium: \$220-\$260 NRSF

# CONSTRUCTION COSTS 2018

CONVENTIONAL MULTIFAMILY

HIGH RISE



FLORIDA

Student

\$265 NRSF (Prescient®)

\$100,000 a bed



PLANO, TEXAS **\$289 NRSF HUD 221(d)4** 



\$259 per NRSF
Started 2 years ago
All Steel - Now 20% higher



#### MULTIFAMILY COUNTERTOP SOLUTIONS FOR THE 2018 QUARTZ TARIFF

- Many developers are scrambling to cope with the impending quartz tariffs
- GRS's products are domestically sourced, environmentally friendly
- Created from 85% recycled glass and porcelain mixed with 15% VOC-free epoxy resin
- Mirrors look and feel of quartz
- Similar to pre-tariff quartz price
- Can be installed nationally

WWW.GLASSRECYCLED.COM







### ONE HUMPHREYS FAMILY OF COMPANIES



Award-winning studio leading the industry in inventive interior multifamily design. With an ever expanding portfolio into student housing, senior living, high rise and hospitality and multiple office locations in **Dallas**, **Denver**, **Chicago**, **Orlando**, and **Newport Beach**.

www.hpadesigngroup.com



HPLA provides landscape architecture and site planning consulting services to the private and public sector specializing in the landscape architectural design for multifamily and mixed-use projects with two office locations in **Scottsdale** and **Dallas**.

www.hplastudio.com

### **\(\Delta\)** civil engineering

A full service firm with experience and proficiency in the multifamily, single family subdivisions, senior living, retail, commercial, office, industrial and Healthcare industries with office locations in **Dallas** and **Houston**.

www.hpcivileng.com



GRS turns glass bottles and recycled porcelain fixtures into gorgeous slab material. Unique countertops, flooring, and wall applications are created from a variety of products for commercial and residential use.

www.glassrecycled.com

MULTIFAMILY SEPT. 17 **EXECUTIVE** CONFERENCE LAS VEGAS

2018

### **UPCOMING EVENTS**

WE HOPE TO SEE YOU THERE!

2019

NMHC 03 STUDENT HOUSING CONFERENCE HUNTINGTON BEACH, CA **REAL SHARE APARTMENTS** LOS ANGELES

**JAN.** 29

NMHC ANNUAL MEETING & APT. STRATEGIES CONF. SAN DIEGO

FEB.

19

**INTERNATIONAL BUILDERS SHOW** LAS VEGAS

### **CONTACT US**



**GREG FAULKNER** 

PRESIDENT

DALLAS 972.701.9636 greg@humphreys.com



**WALTER HUGHES** 

VICE PRESIDENT OF DESIGN

DALLAS 972.701.9636 walter@humphreys.com



**DANIEL GEHMAN** 

STUDIO DIRECTOR

NEWPORT BEACH/LOS ANGELES 949.955.9400 daniel@humphreys.com

### **FEEDBACK**

WE WELCOME YOUR OPINIONS Contact us with your ideas and/or any questions on today's discussion. We look forward to hearing from you!



972.701.9636



marketing@humphreys.com



www.humphreys.com

What programs would you like to see in the future?

- New designs & concepts
   Student Housing
  - cepts stadent

Equity

Other (please specify)

Lending

**HUMPHREYS & PARTNERS** ARCHITECTS, L.P.

## THANK YOU!

Please send any questions or comments to marketing@humphreys.com